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AUTHOR Lucek, Linda E.  
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## ABSTRACT

Although the early settlements in cyberspace have tended to be male-dominated, diversity does exist on the Internet. In fact, a 1994-95 study revealed that women comprise 34% of Internet users. Feminism, as it came of age in the 1960s, often equated technoscience with the Vietnam War and with forces in opposition to nature and life. Postmodern feminist theory of the 1980s, on the other hand, can be called technomania rather than technophobia because it extolled the notion that technology was creating a race of cyborgs. More recent schools of thought have encouraged a reconciliation of those two views and remembrance of how technology has been used in the past to oppress those who had no access to it. Feminist scholarship should heed emerging literature which emphasizes the benefits of actual reality over virtual reality and cautions against the loss of intimacy in electronic culture, but at the same time, it should devote time to assembling a profile of the diverse female representation in cyberspace and uncovering the wealth of World Wide Web resources of interest to women. These resources include women's resource pages, feminist activism resources, organizational and professional homepages, events calendars, networked support groups and research projects, online newsletters and magazines, listservs, interactive forums, individual home pages, and virtual clubs. The World Wide Web is conducive to the easy formation of associations and has spawned some that might otherwise not exist. Individuals who might never have had opportunity to share "minority" feelings or hobbies with other like-minded people suddenly have a global culture pool to draw from. An appendix offers uniform resource locators (URLs) for 11 relevant world wide web sites. (Contains 15 references.) (BEW)

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Alice D. Walker

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."

# Women in Cyberspace

by Linda E. Lucek

ED 391 493

## Introduction

We are all beginning to be deluged by references to the importance of the emerging (Inter)National Information Infrastructure, the Data Superhighway and the Internet. Yet many are still asking: "is there really much more there than that of superficial interest to most of us?" and "should we bother trying to find an on-ramp?" and even "is this really a positive development?"

Being a new public structure, and changing at warp-speed, cyberspace opens up many new dangers and ethical dilemmas, issues for which we have inadequate political frameworks in place. Neither a technomaniacal nor technophobic stance is adequate to prepare us for the possible consequences of cyberspace.

It has been said on more than one occasion that there are no women in cyberspace, referring both to literal numbers and to presence in terms of true representation. Although the early settlements in cyberspace have largely tended to be male-dominated, diversity does exist there. Women, men, boys, and girls of many cultures are the pioneers of cyberspace -- not a single, homogenous segment of the population.

A 1994-1995 survey of Internet users, conducted by The Online Research Group, a subsidiary of O'Reilly & Associates has their results posted online at: <http://www.ora.com/survey/>. The survey says that women comprise 34% of Internet users, a

significantly higher percentage than previous estimates had projected.

More than half of all Internet users are between the ages of 18 and 34, and about half work for companies with more than 1,000 employees. The median household income falls in the \$50,000-75,000 range. (Investor's Business Daily 28 Sep 95 A8)

What does it matter, in general, if there is diversity in cyberspace, and specifically, if there is a strong female presence in cyberspace? What difference will it make in the evolution of cyberspace? What difference will it make to women?

How do women take hold of technology to create the world they want to live in? Although trapped in the mire of day-to-day survival, *women must direct time and attention to the creation of alternative visions of the future, or else they may be left out of it.*

(Zimmerman, 1984)

## Feminist Views of Technology

"In the spirit of encouraging futures other than those currently being sold to us", Carol Anne Stabile (1992) maps out the limitations of both technophobia and postmodern technomania in producing adequate "strategies for theorizing the grid, sprawl, hyperspace, or cyberspace known as postmodernity" on terrains ranging from feminist literary criticism to popular culture.

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### Feminist Technophobia

Stabile (1992) reflects on the technophobic historicity of recent feminist thought:

The Vietnam War served to heighten the sense of technological disenfranchisement and hopelessness--television coverage of the war proved technoscience to be synonymous with the war machine and its destruction and devastation. The "second wave" of feminism, coming to age during the late sixties, inherited this sense of technological hopelessness... The trope of a technoscience equated with the war machine and a death drive also served to consolidate a feminist opposition equated with nature and life.

### Feminist Technomania

The technological determinism of the seventies began to give way to postmodern theories in the eighties characterized by a systemic model, the cybernetics systems theory. Donna Haraway (1989) describes it as the "informatics of domination".

Marshall McLuhan saw that by mechanically extending our powers, modern technology is making cyborgs of us all. Donna Haraway hoped to illustrate through her *Cyborg Manifesto* (1989) that humanity has already evolved into creatures both human and technological (i.e., cyborgs) and that this is a wondrous, not wretched, path to take.

The Cyborg Manifesto was written to find political direction in the 1980s in the face of the odd technorganic, humanoid hybrids "we" seemed to have

become worldwide. If feminists and allied cultural radicals are to have any chance to set the terms for the politics of technoscience, I believe we must transform the despised metaphors of both organic and technological vision to foreground specific positioning, multiple mediation, partial perspective, and therefore a possible allegory for antiracist feminist scientific and political knowledge. (Haraway, 1991)

### Achieving a Balance: Thoughtful Engagement with Technology

Midway between the cyborg and ecofeminist positions is an alternative feminist ecological position (Alaimo, 1994), derived from cultural studies which emphasize intervention and poststructuralist Marxist theories, serving to "strengthen feminism's political impact while valuing nature."

Stabile notes several feminists (Evelyn Fox Keller, Sandra Hardy [sic, Harding], Helen Longino) who have encouraged a more productive peace with technoscience, a reconciliation, while at the same time steadfastly holding forth historical lessons of how technology has been used to oppress those who do not possess it or have access to it.

This constitutes an uneasy and wary alliance, constantly subject to examination and reevaluation. Unconditional peace risks losing sight of technology's characteristic proclivity toward abuse, leaving conditions ripe for repression (unintentional or otherwise) to reseed itself. Keep in mind that the *cyberhighway to hell* may be paved with good intentions. Cyberpunk science fiction has provided us with cautionary glimpses of what cyberspace could become.

## Women in Cyberspace

### Entrance Ramp: Proceed with Caution

Using the Information Superhighway analogy, we can ask both about the planners and construction workers developing the highway and also about those who are cruising it. How is "Rosie the Riveter" represented in cyberspace? Where do women drivers go when they cruise? What are the facilities, rest stops, and points of interest for women and where are they located?

At the same time we choose to explore this new cyberspace, we should listen to the travel advisories, the cautionary tales of highwaymen and con artists, neighborhoods to avoid and the diversionary and seductive allure of the open road. Just as Jack Kerouac inspired many a biker, the information highway also has its heroes. However, some are now posting hazard signs.

For example, Clifford Stoll, astronomer and computer jock, who wrote *The Cuckoo's Egg* (a best-selling, factual account of espionage, chase and capture on the Internet), has now come up with *Silicon Snake Oil: Second Thoughts on the Information Highway*. His new book (1995) outlines all the reasons *NOT* to get wired, emphasizing the benefits of *actual* reality over virtual reality and the loss in intimacy associated with overemphasis on electronic culture.

Dinty W. Moore's new book entitled *The Emperor's Virtual Clothes: The Naked Truth About Internet Culture* (1995) also cautions against taking Internet relationships too seriously:

Trading e-mail is a sort of relationship, but it is not a full relationship -- not even close. I worry about a day when we all communicate this way,

choosing our words maybe \*too\* carefully, just as carefully as choosing our natures and dispositions, our online names, and even our genders, based less on who we are than on what we wish to project.

(Chronicle of Higher Education 6 Oct 95 A23)

Who are the women currently pioneering cyberspace? Some are educators. Some are scientists, engineers, computer scientists, *zine* (electronic magazines) reporters, artists, students, women's rights activists, advertisers, business representatives, politicians, philosophers, musicians, etc. -- just about any occupation imaginable. They come from many cultures with diverse cultural interests. Some might consider themselves "geeks" and others would not.

Some are representing academic institutions, religious affiliations, organizations, commercial interests, projects, or hobbies; others are representing themselves, subpersonalities, or misrepresenting themselves. This section contains a sampling of their activity, as reflected specifically on the World Wide Web portion of cyberspace.

### Women's Resources Pages and Feminist Activist Resources

A number of sites on the Web attempt to provide comprehensive indexing of women's resource listings/links on the Internet or Web; some are specifically devoted to feminist activism and related issues (e.g., women and politics, women and career issues). There are also sites expressly concerned with legal resources for women, women's health issues and resources, reproduction and abortion rights, gay/lesbian/bisexual resources, child care, domestic violence, sexual

harassment, and academic Women's Studies programs.

There is a great deal of overlap with such issues and many of the sites naturally link from one to another. Some, of course, oppose each other: such as "pro-choice" and "pro-life" sites. Some rather comprehensive listings are the work of individuals with great concern for an issue; some are the work of "official" organizations, committees, or research projects and it's not always apparent which is the case.

Neither is it always easy to determine from what sources the information has been derived. Presumably, some of it has been entirely made up. There is nothing to prevent such freedom of speech (*or* manufacture of "truth"). Responsible webmasters anticipate the need for source information and provide it in order to establish credibility for their sites.

### Organizational and Professional Home Pages

The National Organization for Women (NOW) established and maintains their own Web site. It includes general information about the organization, organizational history, chapters and regions, national offices, membership information and contacts. In addition, they have their press statements and positions on various topics available online, issues of their monthly newsletter, links to other feminist resources, and an area in which to leave suggestions or comments. This is a fairly typical format for an organizational site.

Examples of other organizational information available include: Women in Computer Science, Society of Women Engineers, Women of Color Caucus of the Society for Women in Philosophy, Lesbianas Latinas, University of Oregon Women Faculty Resource Network and on and on and on.

Several home pages exist for the League of Women Voters in different

areas. For example the Ann Arbor, Michigan has a site at <http://www.sils.umich.edu/Community/Students/lmcewen/lwvhome.html>.

The *Voices of Women Home Page* (rated in the top 5% of all Web sites) provides a directory and professional listing of "woman-friendly, woman-owned, and woman-operated businesses". It can be found at <http://www.voiceofwomen.com/>.

Shown in Figure 1 below is the logo off the Home Page of the Small Business Association's Office of Women's Business Ownership. Their website is at <http://www.sbaonline.sba.gov/womeninbusiness/>.

Figure 1.



### Conferences and Events Calendars

Often a part of an organizational site, but worthy of separate commentary, are the conference and event calendars available online. Having availability to information on events of interest a few clicks away can add enormously to cohesion and success of emerging ideologies. Awareness of what is being planned, discussed or acted on in one location, can add impetus to the progress of similar events elsewhere. Even after an event has ended, if the proceedings are made available online, the effects can continue to ripple through cyberspace. The UN's Fourth World Conference on Women in

Beijing, held September 4-15, 1995, had strong representation on the Web from a number of sites before, during, and after the conference.

With Canada's financial help, feminists at the conference are setting up networks linking them together to track government action on women's rights and mobilize protests against any backsliding politicians trying to squirm out of the UN's plan to improve women's lives.

(Toronto Star 13 Sep 95 A16).

This Canadian page offered general news, late breaking news, background information and more, in both French and English. It was updated daily during the conference and can still be found at <http://www.iisd.ca/linkages/women.html>

Shown in Figure 2 is the logo from the United Nations' Division of the Advancement of Women site at <http://www.undp.org/fwcw/daw1.htm>:

Figure 2.



The Institute for Global Communications (a division of the Tides Foundation nonprofit charitable organization) had their own Web page on the same conference with information on the non-governmental organizations (NGOs) who are part of WomensNet. The logo for their page is shown below in Figure 3.

Figure 3.



A typical example of a conference page is the one provided for the *Grace Hopper Celebration of Women in Computing*. It allows you to access general information on the conference, the conference schedule, registration form, or order a beautiful commemorative poster or t-shirt. All the program components including papers, social events, hotel reservation information and layout, transportation maps, round tables, birds-of-a-feather sessions, vendor demonstrations are sometimes put together to form a complete online conference kiosk available before, during, and after the actual event.

### Projects

Global networking technology has facilitated quite a number of projects designed to encourage women's participation in its evolution. A few examples will be mentioned here. *Virtual Sisterhood* is a global women's electronic support network, dedicated to increasing women's access to and effective use of electronic communications, founded by Barbara Ann O'Leary. Originating from the Women's Information and Documentation Center in Zagreb, and becoming an independent project within

the feminist movement in the Yugoslav successor states, *Electronic Witches* has worked to provide communication technology and communication literacy to women globally.

The Ada Project (TAP), named in honor of Ada Lovelace, was established out of Yale University in July 1994 as a central Web site through which resources for women in computing can be "tapped". It has been quite popular, recording over 2500 hits from more than 1700 machines in the first two months of operation. The hope is that the user community will help keep TAP up-to-date, by volunteering biographical profiles and Web links and through submission and feedback features on TAP pages.

#### **Zines, Newsletters, Mailing Lists, Interactive Forums, and Subscription Services**

"Free" and subscription-based electronic magazines are popping up all over cyberspace. Some have advertisers or sponsors, numerous journalists and technical staff; others are the part-time ventures of hobby enthusiasts.

The online newsletter for the Virtual Sisterhood support network is entitled *Sea Change*. It is located at <http://www.igc.apc.org/vsister/initiat.html>

(logo shown in Figure 4 below).

Figure 4.



**Tidings from the Virtual Sisterhood**

*Women'space* (at <http://www.softaid.net/cathy/vsister/w-space/womspce.html>) is an online newsletter for and about women, based in Nova Scotia, Canada. It was "born out of a

need to develop our understanding and our use of cyberspace as a powerful tool for women's activism.

The online daily newspaper, the *San Francisco Examiner*, has a regular section entitled the *San Francisco Examiner Women's Web*, similar to the women's section of numerous hardcopy newspapers. Time Warner's Pathfinder, which electronically publishes portions of *Time*, *People*, *Money*, and *Entertainment Weekly* often has articles targeted for women.

*Spiderwoman* is a mailing list dedicated to supporting women Web designers and there is a supporting Web site for it. *The Women's Page at the Social Cafe* at <http://www.social.com/social/women.html> sponsors an "interactive" discussion area for women's issues. Messages can be posted on any topic of concern to women and are available to be read and responded to by "thread" or subject.

*Women's Wire* runs both a subscription service and a free archive of some of its information. An example of a "fringe" zine is *Geekgirl*, published out of Australia from an account called "spyfood" located on *Next Online*, whose opinions are not necessarily the same as those expressed within *Geekgirl*. A regular feature in *Geekgirl* is the Electronic Salon, a forum for presenting and promoting women's viewpoints and thoughts on technology. There appear to be only a couple of reporters, using cyberhandles (such as RosieX) who drum up electronic interviews with people like Sadie Plant, Noam Chomsky, and Spider Redgold on topics like cyberfeminism, *Tank Girl*, and cryptography.

#### **Individual Home Pages and Virtual Clubs**

Web Womyn, Geekgrrls, and Voxxen are all loosely-based groups of female Web crawlers and Web publishers. They find group identity because of the Web itself. This is one

example of a type of cyberspace culture which does not exist independently of the medium. Virtual club members may find each other on the Web, perusing each others' home pages, and creating links to their new-found friends.

## Conclusion

The Web is conducive to the easy formation of associations at many levels. While the Web's usefulness in advancing the goals of professional associations may be obvious, it has also proven to be home or spawning ground to numerous associations that might otherwise not exist at all. Often the members have never met in person; sometimes, the members may be so inspired that sooner or later they make it a goal to meet in person perhaps from around the globe.

Individuals who might never have opportunity to share "minority" thoughts or feelings with others of similar "culture" suddenly have global culture pool to draw from. For example, a teenager in a small town who comes into an awareness of lesbian identity may have no local lesbian culture to relate to. There is a strong gay/lesbian/bisexual presence on the Internet. (Examples include the *CyberQueer Lounge Women Home Page* at <http://www.cyberzine.org/html/GLAIDS/Women/womenpage.html> and Queer Infoservers at <http://server.berkeley.edu/queer/qis/womens.html>.) Individuals can retain their anonymity while they search for information or relationships on the Internet. If the teenager becomes a "modem grrl", she will have access to more gay culture than she may know how to handle.

The same is true for many other subcultures. Cyberspace is a hotbed for the formation of cultural identity. Radical activists are bound to find others of like thinking, even if there is no one

around geographically for hundreds of miles who shares their ideology.

The same hold true however, for orchid horticulturists, game enthusiasts, transpersonal psychologists, or performance artists (etc., etc.). Rather than considering cyberspace to be a medium conducive to "destructive" elements of society, perhaps it would be helpful to think of the technology evolving as cyberspace more as a supercatalyst or leavening which speeds up or exponentializes all sorts of interactions.

Just as telephone systems and highway systems have made all sorts of transactions and cultural configurations possible, because of *increased* ease and speed of communication or transportation, cyberspace is another evolutionary step in this direction. If, as Donna Haraway believes, it is an inevitable step in the direction of cyborg nature, that does not mean the loss of all things "human".

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## Appendix A: Other Web Resources for Women

**Women's Resources - Academic**  
*University of Oregon Women Faculty Resources Home Page*  
<http://www.oregon.uoregon.edu>

**Women Homepage**  
<http://www.mit.edu:8001/people/sorokin/women/index.html>

**Women and Technology**  
*Women Undergrads in Computer Science*  
<http://infomac1.science.uimelb.edu.au/cielle/women/wusc.html>

**Web-sters' Net-Work: Women in Info Technology**  
[http://lucien.berkeley.edu/women\\_in\\_it.html](http://lucien.berkeley.edu/women_in_it.html)

**The Grace Hopper Celebration of Women in Computing**  
<http://www.digital.com/pub/doc/hopper/info.html>

**Guides to Women's Health**  
*The Barnard/Columbia Women's Handbook*  
<gopher://dag.cc.columbia.edu:71/11/pub/publications/women>

**News**  
*Women's Wire*  
<gopher://gopher.wwire.net:8001/11/wire>

**Feminist Science Fiction**  
*WisCon -- Feminist Science Fiction Convention*  
<http://www.ws.wisc.edu/wiscon/>

*Feminist Science Fiction bibliography*  
<http://www.uic.edu/~lauramd/femsf.html>

*The James Tiptree, Jr. Award*  
(for the work of science fiction or fantasy published in one year which best explores or expands gender roles)  
<http://www.cs.wisc.edu/wiscon/tiptree.html>

**Minority Issues and Civil/Human Rights**  
*Peacenet - Human rights organizations*  
<http://www.igc.apc.org/igc/pn.html>